REMARKS

Claims 1, 5-11, 13, 15, 16, 19, 20, 21, 23 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura (JP 2001-131827) in view of Tan (WO 02/12395; U.S. Patent No. 6,710,135 used as English equivalent) and in further view of Kondo (U.S. Patent No. 5,593,778) and Zeitler (U.S. Patent No. 5,811,508); and under 35 U.S.C. 103(a) as being unpatentable over Obuchi (U.S. Patent No. 6,417,294) in view of Tan and further in view of Kondo and Zeitler.

Nishimura is cited by the Office as disclosing polylactic acid based flat yarns comprising polylactic acid, with a molecular weight of 90,000-110,000, and a lubricant in the amount of 0.5-5 wt%. The Office states that the lubricant may be ethylene bis-oleic amide or an alkyl-substituted fatty acid monoamide. Nishimura does not disclose melt spun fibers.

Tan is cited by the Office as disclosing polylactic acid resin compositions having a molecular weight from 2000-500,000, used for nonwoven fabrics and yarn, which may contain a "lubricant". The Office characterizes Tan as disclosing melt spinning to be the functional equivalent of tape yarn production.

Kondo is cited by the Office as disclosing biodegradable copolyester compositions which are melt spun into fibers having a typical fineness of 5-55 dtex.

Zeitler is cited by the Office as disclosing hydrolysis resistant polyester fibers, that resistance of a polyester to hydrolysis depends on the number of carboxyl end groups, and that decreasing the number of carboxyl end groups improves the resistance to hydrolysis.

The position of the Office is that it would have been obvious to a person of ordinary skill in the art to modify Nishimura to produce fibers from the compositions disclosed therein by melt spinning because Tan teaches melt spinning to be functionally equivalent to tape yarn production, to modify the fiber resulting from the combination of Nishimura and Tan to have a fineness of 5-55 dtex because Kondo teaches that thinner fibers increase the softness of the resulting article, and to use a carboxyl equivalent of less than 10 meq to form a fiber of superior hydrolysis resistance.

Obuchi is cited as disclosing films formed from polyester compositions containing nucleating agents. The polyester is a polylactic acid having a molecular weight of 90,000-500,000. The nucleating agent is 0.1-10 wt% of the composition and can be

ethylenebislauramide and hexamethylenebisoleamide. Obuchi discloses extrusion molding, but does not disclose the use of melt spun yarn. Tan, Kondo and Zeitler are cited for their disclosures and teachings as explained above.

Initially, applicants maintain their position that the Office has not supported a case of prima facie obviousness of the claims of the application and that, when the teachings of the cited prior art as a whole are considered, a person of ordinary skill in the art would not have had a reasonable expectation that fibers having a fineness of 0.1-10 dtex could be successfully produced from the compositions of Nishimura and Obuchi.

Moreover, the combinations of references cited by the Office fail to disclose or suggest the properties resulting from the use of the specific fatty acid amides according to the present invention (as recited in the rejected claims) in the melt-spinning of polylactic acid. The position of the Office as explained in the Action of December 21, 2007, that since the compositional elements are met by the cited combinations of references, the properties resulting from the use of the specific fatty acid amides according to the present invention would be inherent, is not proper. The Office is improperly comparing the results of the applicant's invention with the results of the applicant's invention. (See MPEP

§ 716.02(e)(III)). The proper issue for consideration is whether the properties would have been reasonably expected. Applicants submit that they are not and the Office has not shown that the properties would have been reasonably expected.

Notwithstanding that the Office has not supported a case of prima facie obviousness of the claims of the application under 35 U.S.C. § 103(a), submitted herewith is a Declaration under 37 C.f.R. 1.132 of Katsuhiko MOCHIZUKI which shows that the combination of Nishimura, Tan, Kondo and Zeitler proposed by the Office will not result in polylactic acid fiber recited in claim 1 of the present application.

The Additional Comparative Examples 1 to 3 of the Declaration represent instances in which the polymer compositions of Examples 1 to 3 of Nishimura are spun by melt-spinning, as taught by Tan, into filaments having a monofilament fineness within a range of 5-50 d (5.5-55 dtex), as taught by Kondo, and have a carboxyl end group concentration taught by Zeitler. In each of the Additional Comparative Examples 1 to 3, the polylactic fibers are inferior to the fiber obtained in the Additional Example, which is representative of the fiber of claim 1 of the present application, with respect to color tone (b* value), suitability to pass through processing steps and evenness of color.

Applicants also note the following regarding Nishimura. Nishimura discloses only lubricants known as antiblocking agents to be compounded with polylactic acid. Nishimura fails to disclose the limitation in claim 1 of compounding a "fatty acid bisamide and alkyl-substituted fatty acid monoamide having a melting point of 100 °C or higher".

Among the lubricants identified in Nishimura, inorganic lubricants such as silica and talc, calcium carbonate, and metal soaps such as aluminum stearate, calcium stearate and magnesium stearate, are active to lower molecular orientation of polylactic acid fibers so that the resistance to friction of the fibers is deteriorated. Also, lubricants such as wax, paraffin and fatty acid esters are prone to come out of fibers during scouring and/or dyeing steps resulting in unsatisfactory wear resistivity in a final product. Nishimura discloses such lubricants and fatty acid amides as equivalents.

Applicants also note that Zeitler discloses carboxyl end-group concentrations of polyethylene terepthalate but contains no reference to polylactic acid. The relationship between carboxyl end group concentration and the durability of a polymer differs largely depending on the kind of polymer. Zeitler also contains no

reference to a "fatty acid bisamide and alkyl-substituted fatty acid monoamide having a melting point of 100 °C or higher".

Thus, the modification of Nishimura, in view of Tan and Kondo and Zeitler, proposed by the Office will not result in the fiber of claim 1 of the present application.

Applicants also submit that the data of the 132 declaration are sufficient to rebut any prima facie obviousness alleged by the Office to be supported by the combination of Obuchi, Tan, Kondo and Zeitler. Obuchi discloses films formed from polyester compositions containing a nucleating agent. Obuchi teaches that the properties of the fiber resulting from the use of erucamide as a nucleating agent are equivalent to those resulting from the use of ethylenebislauramide and hexamethylenebisoleamide. The improved properties of the polylactic acid fiber of the present invention, which result from the use of the specific fatty acid amides according to the present invention in the melt-spinning of polylactic acid, as demonstrated by the data of the 132 declaration, would not have been expected from the teachings of Obuchi.

Claims 13, 15, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura, Tan, Zeitler and Kondo or Obuchi, Tan, Zeitler and Kondo, in further view of Anderson (U.S.

Patent No. 4,009,513). Claims 12, 14, 17, 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura, Tan, Zeitler and Kondo or Obuchi, Tan, Zeitler and Kando in view of Yamakita (U.S. Patent Publication No. 2003/0079297).

These rejections depend on the rejection of claim 1. Since claim 1 has been shown to be allowable, claims 12 to 15, 17, 18, 22, 24 and 25 are also allowable.

The foregoing is believed to be a complete and proper response to the Office Action dated December 21, 2007.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension and any additional required fees may be charged to our Deposit Account No. 111833.

Respectfully submitted,
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Attachment: Declaration under 37 C.f.R. 1.132 of Katsuhiko MOCHIZUKI